Listing of the Claims

In the Claims:

No amendments to the claims have been made. A copy of the claims as filed are listed below for the Examiner's convenience.

1. (Original) A method of migrating at least one client to a selected version of a server-hosted application on a network, where multiple versions of the server-hosted application are available on the network, such that direction of a client to use a specific version may be transparent to a client, comprising the steps of:

(a) installing the multiple versions of the server-hosted application on the network;

(b) creating a register identifying clients having access to the server-hosted application and indicating in the register a version of the server-hosted application that is associated with each client having access to the server-hosted application;

(c) changing an association in the register of at least one client selected from those clients identified in the register to a different version of the server-hosted application; and

(d) directing each client attempting to access the server-hosted application to the version of the server-hosted application with which the client is associated in the register, without requiring that any client be aware of the migration to the different version.

2. (Original) The method of Claim 1, wherein the register comprises meta information for each client.

3. (Original) The method of Claim 2, wherein the meta information for each client includes a status of the client and a version identifier that indicates the version of the server-hosted application associated with the client.

4. (Original) The method of Claim 3, wherein the meta information further comprises a location from where server-hosted application data of a client can be retrieved.

5. (Original) The method of Claim 1, further comprising the step of grouping together version specific server-hosted application data into different data structures, such that at least one data structure exists for each version of the hosted application, and each at least one data structure includes version specific server-hosted application data unique to only one version of the hosted application.

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6. (Original) The method of Claim 1, further comprising the step of grouping together non version specific server-hosted application data into a single data structure.

7. (Original) The method of Claim 1, further comprising the step of grouping together client specific server-hosted application data into different data structures based on the version of the hosted application that is associated with the client specific server-hosted application data, so that a different client data structure exists for each version of the server-hosted application.

8. (Original) The method of Claim 1, wherein the register comprises a separate data structure.

9. (Original) The method of Claim 1, wherein the step of directing each client attempting to access the server-hosted application to the version of the server-hosted application associated with the client comprises the step of examining a request from each client for access to the server-hosted application to determine if the request contains a reference to the version of the server-hosted application with which the client making the request is associated.

10. (Original) The method of Claim 9, wherein when a request from a client does not include a reference to the version of the server-hosted application to which the client should be directed, further comprising the step of incorporating a reference to the version of the server-hosted application to which the client should be directed in a cookie returned to the client from the server, such that when the client makes a future request, the register does not need to be consulted to determine the version of the server-hosted application to which the client should be directed.

11. (Original) The method of Claim 1, further comprising the step of examining a request from a client for access to the server-hosted application to determine if the request contains a reference to the version of the server-hosted application to which the client should be directed, before consulting the register to determine the version of the server-hosted application to which the client is to be directed.

12. (Original) The method of Claim 11, wherein when a request from a client does not include a reference to the version of the server-hosted application to which the client should be directed, further comprising the step of incorporating a reference to the version of the server-hosted application to which the client should be directed in a cookie returned to the client from the server, such that when the client makes a future request, the register does not need to be consulted to determine to which version of the server-hosted application the client should be directed.

13. (Original) The method of Claim 1, wherein when a client attempts to access the server-hosted application and is not identified in the register, further comprising the steps of associating the client with a default version of the server-hosted application; and, adding information identifying the client as being associated with the default version, to the register.

14. (Original) The method of Claim 13, further comprising the step of incorporating a reference to the default version of the server-hosted application in a cookie returned to the client from the server, such that when that client makes a future request, the register does not need to be consulted to determine to which version of the server-hosted application the client should be directed.

15. (Original) The method of Claim 1, wherein when a client attempts to access the server-hosted application, and the request from the client includes a reference to the version of the server-hosted application to which the unique client should be directed, but that reference fails to define a version of the server-hosted application with which data of the client are associated, further comprising the step of consulting the register to determine to which version of the server-hosted application the client should be directed.

16. (Original) The method of Claim 15, further comprising the steps of changing the reference to the version of the server-hosted application contained in the request cookie to correspond with the version of the server-hosted application identified by the register, and returning the cookie that is thus corrected to the client, so that when the client makes a future request, the future request will properly reference the version of the server-hosted application with which the client is associated.

17. (Original) A machine-readable medium having machine instructions for performing the steps of Claim 1.

18. (Original) A system for migrating at least a portion of a plurality of clients to a selected version of a server-hosted application on a network to which the plurality of clients is coupled, where multiple versions of the server-hosted application are available on the network, such that direction of a client to use a specific version of the server-hosted application may be transparent to a user, comprising:

    (a)   a computing device for each client coupled to the network; and

(b)   a server having a processor and a memory in communication with the processor, said memory storing machine instructions that when executed by the processor, cause the processor to:

(i)   install the multiple versions of the server-hosted application for access over the network;

(ii)   create a register identifying the plurality of clients having access to the server-hosted application and including an association of a version of the server-hosted application with each client having access to the server-hosted application;

(iii)   change an association in the register of a first group of clients selected from the plurality of clients, to a different version of the server-hosted application; and

(iv)   direct each client attempting to access the server-hosted application to the version of the server-hosted application with which the client is associated in the register, without requiring that a user of any client be aware of the migration to the different version.

19.   (Original) The system of Claim 18, wherein the machine instructions, when executed by the processor, further cause the processor to direct each client attempting to access the server-hosted application to the version of the server-hosted application with which the client is associated, by consulting the register to determine the version of the server-hosted application to which the client should be directed.

20.   (Original) The system of Claim 18, wherein the machine instructions, when executed by the processor, further cause the processor to direct each client attempting to access the server-hosted application to the version of the server-hosted application with which the client is associated, by examining a request from each client to the server to determine if the request contains a reference to the version of the server-hosted application to which the client should be directed.

21.   (Original)   The system of Claim 20, wherein when the request does not include a reference to the version of the server-hosted application to which the client should be directed, the machine instructions cause the processor to identify the version of the server-hosted application to which the client should be directed, by consulting the register.

22.   (Original)   The system of Claim 21, wherein when the request does not include a reference to the version of the server-hosted application to which the client should be directed, the machine instructions further cause the processor to incorporate a reference to the version of the

server-hosted application to which the unique client should be directed in a cookie returned to the client from the server, such that when the client makes a future request, the register does not need to be consulted to determine to which version of the server-hosted application the client should be directed.

23. (Original) The system of Claim 18, wherein when a client attempts to access the server-hosted application, and the client is not identified in the register, the machine instructions further cause the processor to associate the client with a default version of the server-hosted application, and add the client in association with the default version, to the register.

24. (Original) A method of enabling multiple versions of a server-hosted application to be provided to a network, such that a client requesting to access the server-hosted application is not required to affirmatively select a specific version of the server-hosted application to be accessed, comprising the steps of:

(a) enabling the multiple versions of the server-hosted application to be accessible to the network;

(b) creating a register identifying each client having access to the server-hosted application, and including an association of each client with one version of the server-hosted application that the client is allowed to access;

(c) each time a client attempts to access the server-hosted application, automatically identifying the version of the server-hosted application that said client is allowed to access; and

(d) automatically directing said client to the version of the server-hosted application that said client is allowed to access.

25. (Original) The method of Claim 24, wherein the register comprises meta information for each client, said meta information including at least a status of a client and a version identifier that identifies the version of the server-hosted application that a client is allowed to access.

26. (Original) The method of Claim 24, wherein the step of automatically identifying the version of the server-hosted application that said client is allowed to access comprises the step of consulting the register to determine the version of the server-hosted application that said client is allowed to access.

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27. (Original) The method of Claim 24, wherein the step of automatically identifying the version of the server-hosted application that said unique client is allowed to access comprises the step of examining a request from said client to the server to determine if the request contains a reference to the version of the server-hosted application that said client is allowed to access.

28. (Original) The method of Claim 27, wherein when the request includes a reference to the version of the server-hosted application that said client is allowed to access, but the reference fails to define a version of the server-hosted application with which data of said client is associated, the step of automatically identifying the version of the server-hosted application that said client is allowed to access further comprises the step of consulting the register to determine the version of the server-hosted application that said client is allowed to access.

29. (Original) The method of Claim 28, further comprising the step of incorporating a reference to the version of the server-hosted application that said client is allowed to access in a cookie returned to said client from the server, such that when said client makes a future request, the version referenced in the future request is correct.

30. (Original) The method of Claim 27, wherein when the request does not include a reference to the version of the server-hosted application that said client is allowed to access, the step of automatically identifying the version of the server-hosted application that said client is allowed to access further comprises the step of consulting the register to determine the version of the server-hosted application that said client is allowed to access.

31. (Original) The method of Claim 27, wherein when the request does not include a reference to the version of the server-hosted application that said client is allowed to access, further comprising the step of incorporating a reference to the version of the server-hosted application that said client is allowed to access in a cookie returned to said client from the server, such that when said client makes a future request, the register does not need to be consulted to determine the version of the server-hosted application said client is allowed to access.

32. (Original) The method of Claim 24, wherein when said client is not identified in the register, further comprising the steps of selecting a default version of the server-hosted application as the version of the server-hosted application that said unique client is allowed to access, and adding information to the register identifying said client and associating said client with the default version of the server-hosted application that said client is allowed to access.

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33. (Original)   The method of Claim 32, further comprising the step of incorporating a reference to the version of the server-hosted application that said client is allowed to access in a cookie returned to said client from the server, such that when said client makes a future request, the register does not need to be consulted to determine the version of the server-hosted application that said client is allowed to access.

34. (Original) A machine-readable medium having machine instructions for performing the steps of Claim 24.

35. (Original) A system for enabling multiple versions of a server-hosted application to be provided to a network, such that users requesting to access the server-hosted application are not required to affirmatively select a specific version, comprising:

    (a)   a plurality of computing devices coupled in communication with the network, each computing device corresponding to a different client operated by a user; and

    (b)   a server having a processor and a memory in communication with the processor, said memory storing machine instructions defining multiple versions of a server-hosted application, and a register identifying each client and associating the client with a version of the server-hosted application that the client is allowed to access; said memory further comprising machine instructions that when executed by the processor, in response to a request from a client to access the server-hosted application, cause the processor to:

    (i)   automatically identify the version of the server-hosted application that said client is allowed to access by first examining a request from said client for access to the server-hosted application to determine the version said client is allowed to access, and if no version is referenced in the request, then consulting the register to determine the version said client is allowed to access; and

    (ii)   direct said client to the version of the server-hosted application that said client is allowed to access.

36. (Original) A method of enabling a provider of a server-hosted application to migrate selected clients from a first version of said server-hosted application to a second version of said server-hosted application, such that at least one version of the server-hosted application remains accessible to at least some clients during the migration, comprising the steps of:

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(a) creating a register identifying each client having access to the server-hosted application, and associating each client having access to the server-hosted application with the first version of the server-hosted application;

(b) making the second version of the server-hosted application available on the network;

(c) selecting a first group of clients from those clients identified in the register to be migrated to the second version of the server-hosted application;

(d) changing the register so that the register indicates each client included in the first group of clients is associated with and allowed to access the second version of the server-hosted application, but not the first version of the server-hosted application;

(e) each time that a client attempts to access the server-hosted application, automatically identifying the version of the server-hosted application that said client is allowed to access; and

(f) automatically directing said client to the version of the server-hosted application that the client is allowed to access.

37. (Original) The method of Claim 36, wherein the register comprises meta information for each client, said meta information including at least a status of each client and a version identifier that identifies the version of the server-hosted application that the client is allowed to access.

38. (Original) The method of Claim 37, wherein the status comprises at least one of an active state and a being migrated state.

39. (Original) The method of Claim 38, wherein when data of any of the first group of clients must be reformatted to be compatible the second version of the server-hosted application, for each client in the first group of clients whose data requires reformatting, further comprising the steps of:

(a) modifying the register to identify the status of the client as in the being migrated state;

(b) reformatting the data associated of the client to be compatible with the second version of the server-hosted application; and

(c) when the reformatting is completed, modifying the register to identify the status of the client as in the active state.

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40. (Original) The method of Claim 39, wherein if an error occurs in reformatting the data associated with the client; further comprising the steps of:

(a) modifying the register to identify the status of the client as in the being migrated state;

(b) reformatting the data associated of the client to be compatible with the first version of the server-hosted application; and

(c) when the reformatting is completed:

(i) modifying the register to identify the status of the client as in the active state; and

(ii) changing the register so that the register indicate the client is associated with and allowed to access the first version of the server-hosted application, but not the second version of the server-hosted application.

41. (Original) The method of Claim 38, further comprising the step of determining the status of each client attempting to access the server-hosted application, and if the status of the client is identified as being migrated, preventing the client from accessing the server-hosted application, until the status of the client is changed to the active state.

42. (Original) The method of Claim 38, further comprising the step of determining the status of each client attempting to access the server-hosted application, and if the status of the client is identified as being migrated, allowing the client only limited access to the server-hosted application, until the status of the client is changed to the active state.

43. (Original) The method of Claim 38, further comprising the step of determining the status of each client attempting to access the server-hosted application, and if the status of the client is identified as being migrated, allowing the client only limited access the client's data stored by the server-hosted application, until the status of the client is changed to the active state.

44. (Original) The method of Claim 36, further comprising the step of making the first version of the server-hosted application un-available to the network, if each client identified in the register as having access to the server-hosted application, is associated with the second version of the server-hosted application.

45. (Original) The method of Claim 36, wherein the step of automatically identifying the version of the server-hosted application that said client is allowed to access comprises the step of

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consulting the register to determine the version of the server-hosted application that said client is allowed to access.

46.   (Original) The method of Claim 36, wherein the step of automatically identifying the version of the server-hosted application that said client is allowed to access comprises the step of examining a request from said client to the server, to determine if the request contains a reference to the version of the server-hosted application that said client is allowed to access.

47.   (Original) The method of Claim 46, wherein if the request does not include the reference to the version of the server-hosted application that said client is allowed to access, the step of automatically identifying the version of the server-hosted application that said client is allowed to access comprises the step of consulting the register to determine the version of the server-hosted application that said client is allowed to access.

48.   (Original) The method of Claim 46, wherein if the request does not include any reference to the version of the server-hosted application that said client is allowed to access, further comprising the step of incorporating a reference to the version of the server-hosted application that said client is allowed to access in a cookie returned to said client from the server, such that when said client makes a future request, the register does not need to be consulted to determine the version of the server-hosted application.

49.   (Original) The method of Claim 36, wherein when said client is not identified in the register, further comprising the steps of associating said client with a default version of the server-hosted application, and updating the register to identify said client and to indicate that said client is allowed to access the default version.

50.   (Original) The method of Claim 49, wherein said default version is the first version of the server-hosted application.

51.   (Original) The method of Claim 49, wherein said default version is the second version of the server-hosted application.

52.   (Original) The method of Claim 49, further comprising the step of incorporating a reference to the default version of the server-hosted application that said client is allowed to access in a cookie returned to said client from the server, such that when said client makes a future request, the

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register does not need to be consulted to determine the version of the server-hosted application that said client is allowed to access.

53. (Original) The method of Claim 36, wherein when a request from said client to access the server-hosted application includes a reference to the version of the server-hosted application that said client is allowed to access, but the reference fails to indicate a version of the server-hosted application with which data of said client is associated, the step of automatically identifying the version comprises the step of consulting the register to determine the version of the server-hosted application that said client is allowed to access.

54. (Original) The method of Claim 53, further comprising the steps of:

(a)   changing the reference in the request to correspond to the version of the server-hosted application that said client is allowed to access that is defined in the register; and

(b)   returning the changed reference to said client, such that when said client makes a future request, said future request properly references the version of the server-hosted application that said client is allowed to access.

55. (Original) The method of Claim 36, further comprising the steps of selecting a second group of clients from those clients identified in the register that are allowed to access the first version of the server-hosted application, and changing the register so that the register indicates each client included in the second group of clients is associated with and allowed to access the second version of the server-hosted application, but not the first version of the server-hosted application.

56. (Original) The method of Claim 55, wherein when all clients identified in the register are associated with and only allowed access to the second version of the server-hosted application, further comprising the step of making the first version of the server-hosted application unavailable to the network.

57. (Original) A machine-readable medium having machine instructions for performing the steps of Claim 36.

58. (Original) A system for enabling a provider of a server-hosted application to migrate at least some clients from a first version of the server-hosted application to a second version of the server-hosted application, such that at least one version of the server-hosted application remains accessible to at least some of the clients during the migration, comprising:

(a)   a plurality of computing devices, each computing device comprising a different client; and

(b)   a server having a processor and a memory in communication with the processor, said memory storing machine instructions that when executed by the processor, cause the processor to:

(i)   maintain a register that identifies each client having access to the server-hosted application, for each client having access to the server-hosted application, associates the client with the first version of the server-hosted application;

(ii)   enable the second version of the server-hosted application to be made available to the clients;

(iii)   enable a first group of clients to be selected from those clients identified in the register, for migration to the second version of the server-hosted application;

(iv)   change the register so that the register indicates that each client included in the first group of clients is associated with and allowed to access the second version of the server-hosted application, but not the first version of the server-hosted application;

(v)   each time that any client attempts to access the server-hosted application, automatically identify the version of the server-hosted application that said client is allowed to access; and

(vi)   direct said client to the version of the server-hosted application that said client is allowed to access.